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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Hirofumi Yura et al.

Serial No.:

09/937,991

Filing Date:

September 28, 2001

Title:

"FUNCTIONALIZED GLYCOSAMINOGLYCAN POLYMER AND MEDICAL INSTRUMENTS AND

DRUGS BY USING THE SAME"

Docket No.:

33944

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Asst. Commissioner for Patents Box PCT Washington, D.C. 20231

Sir/Madam:

Pursuant to Rule 56, applicants are submitting the enclosed PTO Form 1449, along with a copy of each reference cited therein. In this Supplemental Information Disclosure Statement, and the prior Information Disclosure Statement mailed January 31, 2002, four (4). Japanese publications were listed:

Publication 1: JP-A-H10-324702 Publication 2: JP-A-H08-504841 Publication 3: JP-A-H06-510783 Publication 4: JP-A-H08-85704

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner of Patents, Washington, D.C. 20231 on the date indicated below.

Jeffrey J. Sopko
Name of Attorney for Applicant(

Date

Signature of Attorney

The following information is provided regarding these publications:

Publication 1 describes a heparinoid homopolymer or copolymer containing a monomer unit represented by the following formula I.

In formula I, R<sup>1</sup> represents an H or methyl group, R<sup>2</sup> represents a crosslinking element, and A represents a sulfated polyol, polyamine group or a (poly)amine(poly)ol group which optionally contains one or more acetal or aminal carbonyl functional groups. Specifically, the substituent group A in formula I is a sulfated linear sugar alcohol having 5 or 6 carbon atoms, such as pentitol or hexytol, or a sulfated pentose or hexose.

Publication 2 describes an interpenetrating polymer network (IPN) prepared by mixing a hyaluronic acid or esters thereof with a synthetic polymer, such as polyacrylic acid, polyacrylamide, polyvinylalcohol, and drying the resulting mixture.

Publication 3 describes a biologically active conjugate comprising a substantially straight-chained organic polymer having a lot of functional groups distributed along its backbone and having at least 20 glycosaminoglycan units covalently bound to the backbone via the functional groups. The polymer backbones of Publication 3 are preferably selected from natural or synthetic polypeptides, polysaccharides, and aliphatic polymers.

Publication 4 discloses a glycosaminoglycane derivatives such as those represented by the following formula (2).

$$GAG - R' - NHCH2CH2NHCH2CH O CH2$$

$$| OH$$

$$.....(2)$$

These derivatives were copolymerized with acrylicamide to form a polymeric solid support for use in electrophoresis.

Respectfully submitted, PEARNE & GORDON LLP

By:\_

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